PC Emulator (Version 1.8) Upgrade Release Note

Introduction

This is an upgrade to Version 1.8 of the Acorn PC Emulator for all existing PC Emulator owners (Versions 1.34 and below, 1.60, and 1.70, with DR DOS or MS-DOS).

The PC Emulator packing list described on page v in the accompanying PC *Emulator* guide refers to the complete PC Emulator product and is different from the components supplied with this upgrade.

MS-DOS and DR DOS are not supplied as part of this upgrade; simply use your existing versions.

Packing List

The PC Emulator Upgrade kit consists of:

- this release note
- the PC *Emulator* guide
- Acorn PC Emulator Single tasking (CGA) disc
- Acorn PC Emulator Multitasking (CGA/EGA/VGA) disc
- Acorn PC Emulator DOS Support disc
- End-user licence conditions
- Acorn Registration card.

If any of these items are missing or damaged, please contact

PC Emulator 1.8,
Acorn Direct,
Vector Services,
13 Dennington Road,
Wellingborough, Northants, NN8 2RL (0933 279300)

PC Emulator 1.8 Upgrade discs

Acorn PC Emulator Single tasking (CGA) disc

This contains all the files needed for the single-tasking PC Emulator. These are

- !PCEmS – the small PC Emulator application
- !MultiFS – the desktop filer application that lets you view DOS format discs in a window
- !System – which contains modules needed by the emulator
- !Merge – an application that should be used to update your existing !System.

Acorn PC Emulator Multitasking (CGA/EGA/VGA) disc

This contains all the files needed for the multi-tasking PC Emulator. These are

- !PCEm – the PC Emulator application
- !MultiFS – the desktop filer application that lets you view DOS format discs in a window
- !System – which contains modules needed by the emulator
- !Merge – an application that should be used to update your existing !System.

Acorn PC Emulator DOS Support disc

This disc is in DOS format and can only be read with the emulator (or MultiFS). It contains the following files:

- CDFS_DRV.SYS – is only necessary for CD-ROM users. It replaces the file supplied with PC Emulator (Version 1.70).
- AMOUSE.COM – contains a new copyright message showing that it has been loaded. It is not necessary to update this file if you do not wish to do so.
- EMS.SYS – is only necessary if you wish to use expanded memory. If you wish to use it move the file onto your DOS hard disc partition or boot floppy disc.

- GETFILE.EXE and PUTFILE.EXE – are identical to those supplied with PC Emulator (Version 1.70). It is not necessary to replace these files.

Upgrading the PC Emulator discs

Warning: do not delete your existing hard disc partition file.

You do not need to modify your DOS boot disc or hard disc partition unless you wish to use the items on the DOS support disc. You merely have to replace your existing PC Emulator application with the new one.

1. If you have installed the PC Emulator on a hard disc then, as a safety backup, rename your existing installed PC Emulator applications.
2. Install the new PC Emulator discs by following the instructions given in pages 1 to 8 in the accompanying PC *Emulator* guide.
3. Configure the emulator to suit your requirements. For details of how to do this see the section entitled *Configuration* on page 19 in the accompanying PC *Emulator* guide. If you had a hard disc partition file, then you will probably want to configure the PC Emulator to use it.

Upgrading the DOS discs

Start up your newly-installed PC Emulator and boot DOS from your old MS-DOS or DR DOS boot disc (either floppy disc or hard disc partition). For details of how to do this see the chapter entitled *Running the* PC *Emulator* in the accompanying PC *Emulator* guide.

- If you are a CD-ROM user you must copy CDFS_DRV.SYS to your disc. Typically this would be in the root directory of your hard disc partition. In this case the commands to replace it would be:

```
REN C:\CDFS_DRV.SYS CDFS_DRV.OLD
COPY A:\CDFS_DRV.SYS C:\
```

- If you wish to use the new version of AMOUSE.COM you must copy AMOUSE.COM onto your DOS Boot disc:

```
COPY A:\AMOUSE.COM C:\    (for hard disc)
COPY A:\AMOUSE.COM B:\    (for floppy)
```

- If you wish to use expanded memory you must copy EMS.SYS onto your DOS Boot disc:

```
COPY A:\EMS.SYS C:\       (for hard disc)
COPY A:\EMS.SYS B:\       (for floppy)
```

  For more details of EMS.SYS see the sections entitled LIM EMS *size* and *The expanded memory device driver*, on pages 23 and 39, in the accompanying PC *Emulator* guide.

Differences between versions 1.70 and 1.8

The major differences between versions 1.70 and 1.8 are as follows:

- VGA is fully emulated.
- LIM 3.2 expanded memory emulation is provided.
- A single task only configuration option has been added.
- MDA emulation has been removed.
- A number of minor improvements have been made to the emulation.

PC Emulator Guide – Addendum

Using !MultiFS on RISC OS 3

!MultiFS will not recognise DOS hard disc partition files if their file type is DOSDisc (fc8) – it should be file type Data (ffd). This means that it is not possible simultaneously to use both the RISC OS 3 DOSFS mechanism and the !MultiFS application to examine DOS hard disc partition files. It is recommended that on RISC OS 3 the DOS hard disc partition files should have file type DOSDisc and that !MultiFS should not be used.

Low memory

On 2MB machines, there is often only just enough room to run !PCEm. If the emulator is short of memory, changing RISC OS screen mode can cause problems. The PC Emulator tries to offer a reduced functionality black and white only window in the event that it hasn't sufficient memory. This allows the emulator to continue running until more memory is made available to it. It is recommended that on a 2MB A5000 the emulator is started while in RISC OS screen mode 27 and that the RISC OS screen mode isn't changed.

Using external 80-track 5.25 inch floppy disc drives

Under RISC OS 3 it is possible to use an external 80-track double-density 5.25 inch floppy disc drive to read and write DOS 360K discs, by forcing the head to be double-stepped. Note that this is not possible under RISC OS 2.

The PC Emulator can be made to do this by adding the keyword DoubleStep to the Floppy configuration line in the !Choices file. The !Choices file can be edited directly in !Edit. To display !Choices, hold down Shift and double-click on !PCEm. Load Edit and drag !Choices over Edit's icon bar icon. The file will be displayed in an Edit window.

For a machine with an internal 3.5 inch floppy and one external 80 track 5.25 inch floppy, the !Choices file should contain the lines

```
# floppy disc drives:
Floppy 3.5
Floppy 5.25 DoubleStep
```

Use of four DOS hard disc partition files

Although the configuration dialogue box only contains slots for two hard disc partition files, it is possible to attach up to four DOS hard disc partition files. Note that this is only useful under DR DOS. To add extra hard disc files, modify the !Choices file using Edit, and add additional lines starting with the keyword `HardDisc`.

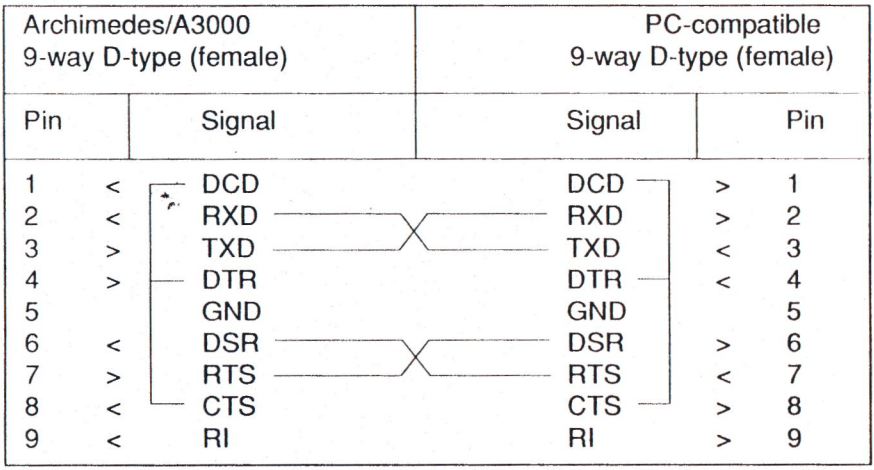
Formatting double-density floppies at high density

On an A5000 it is often possible to format, at high density, floppy discs that are only double-density. This should be avoided as such formatted discs may not be read reliably on PC-compatible

computers. For reliable data transfer between an A5000 and PC-compatibles, it is best to format high-density floppies at high density (1.44MB). Note that high density (1.44MB) is the default format on A5000s under the PC Emulator.

Serial cable wiring

The serial cable wiring described in the PC Emulator Guide for connecting the PC Emulator running on an Acorn machine to an IBM PC-compatible machine should be used for Acorn A5000 and later computers. For Acorn computers prior to the A5000 (i.e. Archimedes A300 series, 440 and 400/1 series, and the BBC A3000) the following serial cable wiring is recommended:



Note that as described in the PC Emulator Guide

- serial communications will only work at very low baud rates
- software hand shaking (XON/XOFF) must not be used
- the emulator must be in single-tasking mode.

The Erase RISC OS configuration option

The 'Erase RISC OS' option in !PCEmS should not be used on RISC OS 3 (version 3.00) supplied with the A5000. Users with 2MB or more of memory are recommended to use !PCEm rather than !PCEmS.

Note that if your DOS hard disc partition is placed across a network, then the Erase RISC OS option should not be used because it will remove from memory modules needed by the network. This can result in the machine hanging. (Expert users can edit the list of modules killed in the file !PCEmS.GenBoot.Modules2 for RISC OS 2.00 or !PCEmS.GenBoot.Modules3 for RISC OS 3.)

Formatting under MS-DOS 3.21

Note that, as described in the section entitled *Formatting under* MS-DOS 3.21 on page 55 in the accompanying PC *Emulator* guide, floppy discs will by default be formatted to 360K rather than 720K. To overcome this, add the following line to your config.sys file:

```
DRIVPARM = /D:0 /F:2
```

This can be achieved by the command:

```
echo DRIVPARM = /D:0 /F:0 >> \config.sys
```

Note that high density floppy disc formats (1.44MB and 1.2MB) cannot be formatted under MS-DOS 3.21. Note also that MS-DOS 3.21 cannot be booted from an external 5.25 inch floppy disc drive.

Additional PC screen mode 0x6A

An additional PC screen mode (number hexadecimal 6A) is supported. This is an 800x600 4bpp mode.

Commenting out ModesCGA

In the PC Emulator Guide it describes how to comment out the use of the ModesCGA module. As well as commenting out the line

```
RMEnsure ModesCGA 1.00 RMLoad <Obey$Dir>.ModesCGA
```

as described in the guide, the following line:

```
RMEnsure ModesCGA 1.00 Error Requires ModesCGA 1.00 (ModesCGA) or later
```

should also be commented out.

Harvard Graphics Desktop Publisher (HGDP.EXE)

If the PC Emulator is switched from single tasking to multitasking mode or vice-versa while HGDP.EXE is running, all screen output will cease. Therefore it is recommended that the single tasking is selected before HGDP.EXE is run and remained in until HGDP.EXE is exited.

Sound Emulation

The PC Emulator cannot successfully emulate complex sound generation, such as lengthy tunes or synthesised speech. Using the sound facilities provided in some programs (for example, *The Guinness Disc of Records* CD-ROM) can cause the emulator to hang.

© Copyright 1992 Acorn Computers Limited
Published by Acorn Computers Limited
Part number 0484,162
Issue 2, March 1992